

Claims

1    1. A wireless telephone system comprising:  
2       a mobile wireless telephone member including:  
3           short range radio frequency communication means  
4           for transmitting and receiving voice data over a  
5           short range;  
6           long range radio frequency communication means  
7           for transmitting and receiving voice data over a  
8           long range;  
9           stationary communication means for receiving and  
10          transmitting voice data from and to said mobile wireless  
11          member voice data over said short range; and  
12           stationary communication means for respectively  
13          receiving and transmitting voice data from and to said  
14          mobile wireless member voice data over said long range.

1    2. The wireless telephone system of claim 1 further  
2       including means for determining whether said mobile  
3       wireless telephone member is outside said short range  
4       when said member is receiving or transmitting said voice  
5       data.

1    3. The wireless telephone system of claim 2 further  
2       including means for communicating with said mobile  
3       wireless telephone member through said stationary short  
4       range radio frequency means whenever said member is  
5       determined not to be outside of said short range.

- 1 4. The wireless telephone system of claim 3 further
- 2 including means for communicating with said mobile
- 3 wireless telephone member through said stationary long
- 4 range radio frequency means whenever said member is
- 5 determined to be outside of said short range.

1 A 5. A wireless telephone system comprising:  
2 a mobile wireless telephone member including:  
3 short range radio frequency communication means  
4 for transmitting and receiving voice data over a  
5 short range;  
6 long range radio frequency communication means  
7 for transmitting and receiving voice data over a  
8 long range;  
9 a cordless base member, wired into a wired telephone  
10 network, for receiving and transmitting from and to said  
11 mobile wireless member voice data over said short range;  
12 and  
13 stationary communication means for respectively  
14 receiving and transmitting to and from said mobile  
15 wireless member voice data over said long range.

1 6. The wireless telephone system of claim 5 further  
2 including means for determining whether said mobile  
3 wireless telephone member is outside said short range  
4 when said member is receiving or transmitting said voice  
5 data.

1 7. The wireless telephone system of claim 6 further  
2 including means for communicating with said mobile  
3 wireless telephone member through said cordless base  
4 member whenever said member is determined not to be  
5 outside of said short range.

1 8. The wireless telephone system of claim 6 wherein said  
2 stationary communication means for respectively receiving  
3 and transmitting to and from said mobile wireless member  
4 voice data over said long range and includes a wireless  
5 telephone area base station wired into said wired  
6 telephone network.

1 9. The wireless telephone system of claim 8 further  
2 including means for communicating with said mobile  
3 wireless telephone member through said wireless telephone  
4 area base station whenever said member is determined to  
5 be outside of said short range.

1 10. The wireless telephone system of claim 9 wherein  
2 said means for determining whether said mobile telephone  
3 member is outside said short range includes:  
4       means responsive to the initiation of a telephone  
5 call for first determining whether a radio frequency  
6 communication from said cordless base member can reach  
7 said mobile member, and  
8       means responsive to a determination that said  
9 communication from said base member cannot reach said  
10 mobile member for then automatically switching to radio  
11 frequency communication with said mobile member through  
12 said wireless telephone area base station.

1 11. The wireless telephone system of claim 9 wherein  
2 said wireless telephone system is a cellular phone  
3 system, and said telephone base station area is in an  
4 area cell within said cellular system.

9  
1 12. The wireless telephone system of claim 9 further  
2 including means in said mobile wireless member enabling a  
3 telephone user to switch between said short range and  
4 long range communication means whenever said member is  
5 not outside of said short range.

1 13. The wireless telephone system of claim 12 further  
2 including means in said wired telephone network for  
3 tracking the respective times of telephone communications  
4 through said short range and said long range means.

A 14. In a wireless telephone system comprising a mobile  
2 wireless telephone member short range radio frequency  
3 communication means for transmitting and receiving voice  
4 data over a short range, and long range radio frequency  
5 communication means for transmitting and receiving voice  
6 data over a long range; stationary communication means  
7 for receiving and transmitting voice data from and to  
8 said mobile wireless member voice data over said short  
9 range; and stationary communication means for  
10 respectively receiving and transmitting voice data from  
11 and to said mobile wireless member voice data over said  
12 long range, a method for determining whether said  
13 communication will be short range or long range  
14 comprising:

15 determining whether said mobile wireless telephone  
16 member is outside said short range when said member is  
17 receiving or transmitting said voice data, and

18 communicating with said mobile wireless telephone  
19 member through said short range radio frequency  
20 communication whenever said member is determined not to  
21 be outside of said short range.

15. The method of claim 14 further including the step of  
2 communicating with said mobile wireless telephone member  
3 through said long range radio frequency communication  
4 whenever said member is determined to be outside of said  
5 short range.

1 16. The method of claim 15 wherein said step of  
2 determining whether said mobile telephone member is  
3 outside said short range includes:

4 responsive to the initiation of a telephone call,  
5 first determining whether a radio frequency communication  
6 from said stationary communication means for receiving  
7 and transmitting voice data from and to said mobile  
8 wireless member voice data over said short range can  
9 reach said mobile member, and

10 responsive to a determination that said  
11 communication from said stationary communication means  
12 over said short range cannot reach said mobile member,  
13 then automatically switching to radio frequency  
14 communication with said mobile member through said  
15 stationary communication means for said long range  
16 communication.

1 17. The method of claim 16 further including the step of  
2 enabling a telephone user to switch between said short  
3 range and long range communication whenever said member  
4 is not outside of said short range.

1 18. The method of claim 17 further including the step of  
2 tracking the respective times of telephone communications  
3 through said short range and said long range, whereby  
4 telephone usage may be billed at different rates.

1 19. A mobile wireless telephone member comprising:  
2 wireless means for communicating with a cordless  
3 telephone station within a short distance range; and  
4 means for communicating with a station in a cell of  
5 a cellular telephone system over a longer distance  
6 outside of said short distance range.

1 20. The mobile wireless telephone member of claim 19  
2 wherein said cordless telephone station includes a  
3 cordless telephone base.

1 21. The mobile wireless telephone member of claim 20  
2 wherein said cordless telephone station is wired into a  
3 wired telephone network.

1 22. The mobile wireless telephone member of claim 19  
2 wherein said station in a cell of said cellular system is  
3 wired into a wired telephone network.